

Evergreen Technologies, Inc.

Spectra™ 400

Processor Upgrade

White Paper

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Spectra 400 Processor Upgrade

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Product Description

The Evergreen Spectra 400 is a high-performance processor upgrade for 75 MHz and higher speed Pentium® processor-based PCs. Based on the AMD®-K6®-2 processor, this innovative upgrade allows users to migrate to 400 MHz and run 3DNow!™ instructions for faster imaging, smoother video playback and enhanced game play.

Product Highlights

- Delivers up to 6x performance increase in Windows® applications
- Upgrades 75, 90, 100, 120, 133, 150, 166, 200 and 233MHz Pentium-based systems to 400 MHz
- Powered by AMD K6-2 Processor with 3DNow!
- Executes both 3DNow! and MMX™ instructions for better imaging, smoother video playback and an enhanced game experience
- 64K Internal (Level 1) Cache
- Includes a built-in compatibility adapter with voltage regulator
- Supports Windows 98, Windows 95, Windows NT®, Windows 3.x & DOS
- Provides the recommended system speed to run Windows 2000 applications
- Software reinstallation is not required
- Includes step-by-step illustrated Installation Guide
- Expands PC life at a minimal cost
- Lifetime Warranty
- Large selection of BIOS upgrades based on Award and MRBIOS on CD

Product Overview

The Evergreen Spectra 400 is the newest addition to the socket-based upgrade family. Spectra 400 enables Pentium® processor-based systems to perform like 400MHz systems. This upgrade utilizes the AMD-K6-2 400MHz with 3DNow! and upgrades P75 and higher desktop systems to increase performance up to 6 times. As technology constantly improves, the lifecycle of computers continues to decrease. Evergreen's Spectra 400 alleviates the high cost of PC replacement by boosting system performance for a fraction of the cost of a new PC.

Features and Benefits

Spectra 400 increases PC performance up to 6 times and features superior 3D performance, life-like images, graphics, sound and an enhanced Internet experience. The Spectra 400 delivers the power and performance needed for today's most demanding software and carries a lifetime warranty.

Nature of Demand

Corporate America has been searching for a solution to the overwhelming cost of purchasing, deploying and maintaining PC assets that have depreciation schedules anywhere from three to five years. Unfortunately, during the five-year lifecycle during which corporate PCs depreciate, the industry's software and hardware advancements leapfrog the installed base by at least two generations. Evergreen has been working to solve this fundamental problem:

How can corporate IT professionals make their PCs last as long as their PCs depreciation cycle and still keep them productive?
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The Spectra 400 is a reprieve from obsolescence providing older systems with the performance of new systems. With processor upgrades, users can replace the highest performance component of the PC while maintaining the system components that have not improved over time (floppy disk, power supply, chassis, etc).

Evergreen's Spectra offers the best alternative for maintaining the value of a PC. With Spectra, IT managers achieve new system performance while avoiding both the capital cost of buying new systems and the overwhelming maintenance expense of replacing PC motherboards. Spectra does not modify the operating system, so there is no threat of interference with corporate PC data standards. Spectra 400 also offers the opportunity of migrating the installed base to the latest productivity software, including Microsoft Office® 2000 and Windows 2000.

Spectra is a simple, fast, cost efficient vehicle to improve the IT productivity of a business.

Performance

As demonstrated in the graphs below, the performance increase gained from the Spectra 400 is almost 6 times the performance of the original 75MHz Pentium computer. Spectra 400 upgrades Pentium PCs to the performance of comparably configured new PCs.

The following Winstone®99 benchmark illustrates the performance gain over a 75 MHz Pentium.

Original Pentium PC 75 MHz, 32 MB	Before Upgrading	Upgrading with <i>Spectra 400</i>
	2.87	9.03

Based on overall score of Winstone 99 for Windows 98. Test system configuration: Pentium 75 MHz, Intel Advanced/ZP (Zappa) System Board, 430FX chipset AMI BIOS version 1.00.11. BSOT upgraded with MRBIOS version 3.46, 32MB 60ns 72-pin EDO SIMM, Western Digital Caviar AC11200L 1.18GB IDE hard disk, S3 Trio64 PowerGraph 64 PCI 2MB VGA card, onboard 256 L2 cache, Windows 98 version 4.10.1998, DirectX 6™

The following Intel Media benchmarks illustrates the performance gain over the original system performance.

Intel media Benchmark	Original 75 MHz	Original 100 MHz	Original 133 MHz	Evergreen Spectra 400
Windows 95				
Video	57.89	78.48	78.13	397.73
Image Processing	62.93	84.41	109.74	926.36
3D Graphics	51.39	69.23	88.17	184.4
Audio	62.52	83.95	99.79	465.14
Overall	57.18	71.15	95.96	342.61
Windows 98				
Video	56.69	76.85	96.3	402.75
Image Processing	60.18	81.54	106.4	919.59
3D Graphics	57.83	78.46	99.38	198.66
Audio	60.37	81.76	97.29	462.52
Overall	58.1	78.77	97.95	351.49

System configuration: Pentium 75 MHz, Intel Advanced/ZP (Zappa) System Board, 430FX chipset, AMI BIOS version 1.00.11, BSOT upgraded with MRBIOS version 3.46, 32MB 60ns 72-pin EDO SIMM, Western Digital Caviar AC11200L 1.18GB IDE hard disk, S3 Trio64 PowerGraph 64 PCI 2MB VGA card, onboard 256 L2 cache, Windows 98 version 4.10.1998, DirectX 6™

Test Details: Intel Media Benchmark for Windows 98

Compatibility

Spectra 400 upgrades standard Pentium processor-based PCs that are 75MHz and higher, and supports Socket 5, Socket 7 and Super7 Socket platforms. Please call Evergreen's Customer Care Center at 541-757-0934 or sales@evertech.com to check compatibility for your personal system.

How to Order

Please call Evergreen at 541-757-0934 to discuss Spectra 400 with our **CCTeam™** sales group or email to sales@evertech.com.